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RESEARCH ARTICLE

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Notulae to the Italian alien vascular flora: 9

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Abstract

In this contribution, new data concerning the distribution of vascular flora alien to Italy are presented. It includes new records, confirmations, exclusions, and status changes for Italy or for Italian administrative regions. Furthermore, three new combinations are proposed. Nomenclatural and distribution updates published elsewhere are provided as Suppl. material 1.

Keywords

Alien species, floristic data, Italy, new combinations, nomenclature

How to contribute

The text for the new records should be submitted electronically to Chiara Nepi (chiara.nepi@unifi.it). The corresponding specimen along with its scan or photograph has to be sent to FI Herbarium: Museo di Storia Naturale (Botanica), Sistema Museale di Ateneo, Via G. La Pira 4, 50121 Firenze (Italy). Those texts concerning nomenclatural novelties (typifications only for accepted names), status changes, exclusions, and confirmations should be submitted electronically to Gabriele Galasso (gabriele.galasso@comune.milano.it). Each text should be within 1,000 characters (spaces included).

Floristic records

Acacia dealbata Link subsp. *dealbata* (Fabaceae)

+ (NAT) **CAL**: San Marco Argentano (Cosenza), fraz. Scalo Ferroviario, nei pressi dello svincolo autostradale (WGS84: 39.621743N, 16.222419E), margine strada, 120 m, 2 January 2020, *L. Peruzzi* (FI). – Naturalized alien subspecies new for the flora of Calabria.

Hundreds of ramets of heterogeneous size form a small dense wood, about 40 m long and 5 m thick, along a road. According to local people, one individual was planted in the area around 30 years ago, when there was not any road crossing this countryside, rich in olive groves and vineyards.

L. Peruzzi

Aeonium arboreum (L.) Webb & Berthel. (Crassulaceae)

+ (CAS) **MOL**: Termoli (Campobasso), parete rocciosa del promontorio sul quale sorge il borgo antico (WGS84: 42.004633N, 14.998402E), parete rocciosa, ca. 5 m, SE, 14 July 2019, *N. Olivieri* (FI). – Casual alien species new for the flora of Molise.

Some individuals belonging to the cultivar Atropurpureum grow on a subvertical portion of a conglomerate calcareous rock wall.

N. Olivieri

Albizia julibrissin Durazz. (Fabaceae)

+ (CAS) **BAS**: Pisticci (Matera), Strada Provinciale Pozzitello-San Basilio (WGS84: 40.387222N, 16.572222E), bordo strada, 271 m, 3 November 2019, *C.M. Musarella* (FI, REGGIO); *ibidem* (WGS84: 40.385555N, 16.575553E), bordo strada, 228 m, 3 November 2019, *C.M. Musarella* (REGGIO). – Casual alien species new for the flora of Basilicata.

Several individuals at different growth stages were found along the way, probably born from seeds scattered from plants growing in nearby private areas.

C.M. Musarella

Amaranthus emarginatus Salzm. ex Uline & W.L.Bray subsp. *emarginatus* (Amaranthaceae)

+ (CAS) **MAR**: Ancona (Ancona), lungo Via Cardeto nei pressi della Caserma Villarey (WGS84: 43.62065N, 13.51668E), marciapiede, ca. 50 m, 9 July 2018, *N. Hofmann* (PESA); *ibidem*, lungo Via Volterra nei pressi dei giardini del Passetto (WGS84: 43.61569N, 13.53292E), marciapiede, 40 m, 21 October 2019, *N. Hofmann* (FI). – Casual alien subspecies new for the flora of Marche.

According to Iamonico (2015), the population can be referred to *Amaranthus emarginatus* var. *emarginatus*.

L. Gubellini, N. Hofmann, D. Iamonico

Amaranthus palmeri S.Watson (Amaranthaceae)

+ (NAT) **VEN**: Camposampiero (Padova), among the localities Cesere, Zanon and Ferro (WGS84: 45.554528N, 11.951444E), soybean field, 2 August 2018, leg. *A. Milani*, det. *A. Milani*, *D. Iamonico* (FI); Verona (Verona), stazione ferroviaria di Porta Vescovo (WGS84: 45.435721N, 11.016411E), decine di esemplari lungo i binari morti della stazione dei treni, 54 m, no exp., 17 October 2019, *A. Bertolli* (FI, ROV No. 74208). – Naturalized alien species new for the flora of Veneto.

Another population was found in a nearby soybean field (WGS84: 45.575639N, 11.912194E). According to ongoing research on herbicide-resistance (Milani et al. 2018), *A. palmeri* in Veneto is resistant to acetolactate inhibitors, allowing it to self-sustain and spread. At the train station "Verona Porta Vescovo", the population is represented by many fertile plants, which occupy an area of about 50 m in length.

A. Bertolli, D. Iamonico, A. Milani, R.R. Masin

Amaranthus viridis L. (Amaranthaceae)

+ (NAT) **LIG**: Pietra Ligure (Savona), Via F. Crispi (WGS84: 44.153079N, 8.285099E), margine stradale, 4 m, no exp., 11 August 2018, leg. *G. Galasso*, det. *G. Galasso, E. Banfi* (MSNM). – Status change from casual to naturalized alien for the flora of Liguria.

G. Galasso, E. Banfi

+ (CAS) **MAR**: Fano (Pesaro e Urbino), fraz. Caminate, lungo la Strada delle Caminate (WGS84: 43.779363N, 13.036444E), margine stradale, 90 m, 25 September 2019, *N. Hofmann* (FI, PESA). – Casual alien species new for the flora of Marche.

A small population of this species grows along a grassy roadside.

L. Gubellini, N. Hofmann

***Broussonetia papyrifera* (L.) Vent. (Moraceae)**

+ (CAS) **CAL**: Melito di Porto Salvo (Reggio Calabria), Via Pilati (WGS84: 37.920426N, 15.802819E), canale di scolo, 9 m, 5 October 2019, leg. *V.L.A. Laface*, det. *V.L.A. Laface, C.M. Musarella, G. Spampinato* (REGGIO); Montebello Jonico (Reggio Calabria), fraz. Saline Joniche, Borgata Sant'Elia (WGS84: 37.931162N, 15.740749E), bordo strada, 19 m, 11 October 2019, *V.L.A. Laface* (FI, REGGIO). – Casual alien species confirmed for the flora of Calabria.

This species was first reported by Pignatti (1982) for Calabria, and then recorded as not confirmed by Bernardo et al. (2009).

C.M. Musarella, V.L.A. Laface, G. Spampinato

***Buxus microphylla* Siebold & Zucc. (Buxaceae)**

+ (CAS) **ITALIA** (**TAA**): Stenico (Trento), fraz. Sclemo, Via della Breda 3 (WGS84: 46.054415N, 10.882023E), margine su terreno smosso, 757 m, SE, 14 March 2018, leg. *M. Merli*, det. *E. Banfi, G. Galasso* (FI, MSNM, *Herb. M. Merli*). – Casual alien species new for the flora of Italy (Trentino-Alto Adige).

This species was first described from Japan (Ohba 1999) based on a cultivar possibly corresponding today to the one named 'Faulkner'. In Japan, *B. microphylla* var. *japonica* (Müll.Arg.) Rehder & E.H.Wilson identifies the possible wild relative from which the main cultivated forms are derived.

M. Merli, E. Banfi, G. Galasso

***Canna indica* L. (Cannaceae)**

+ (CAS) **BAS**: Policoro (Matera), Via San Giusto (WGS84: 40.217961N, 16.690133E), canale di scolo, 10 m, 3 November 2019, *C.M. Musarella* (FI, REGGIO). – Casual alien species new for the flora of Basilicata.

This species was found in an area of about 2 m^2 along a water drainage channel.

C.M. Musarella

***Casuarina cunninghamiana* Miq. subsp. *cunninghamiana* (Casuarinaceae)**

+ (CAS) **LIG**: Pietra Ligure (Savona), Stazione FFSS di Pietra Ligure/Largo Veterani dello Sport (WGS84: 44.145790N, 8.277779E), nata spontaneamente da seme di *plantae cultae* poste nelle vicinanze, 6 m, no exp., 3 July 2016, *G. Galasso* (FI); *ibidem*,

28 July 2016, *G. Galasso* (FI, MSNM). – Casual alien subpecies new for the flora of Liguria.

G. Galasso, E. Banfi

***Celosia argentea* L. (Amaranthaceae)**

+ (CAS) **CAL**: San Lucido (Cosenza), nel cimitero (WGS84: 39.308302N, 16.058392E), nelle fessure della pavimentazione, 157 m, 21 September 2019, *N.G. Passalacqua*, *M. Aversa* (FI, CLU). – Casual alien species new for the flora of Calabria.

Several individuals grow in between tiles, probably originating from cultivated plants in the neighborhood.

N.G. Passalacqua, M. Aversa, L. Bernardo

***Cenchrus longisetus* M.C.Johnst. (Poaceae)**

+ (NAT) **LIG**: Sarzana (La Spezia), parcheggio lungo Via Sarzanello (WGS84: 44.105626N, 9.985910E), margine erboso, presenza continua lungo Via Sarzanello da 44.105325N, 9.985314E a 44.106434N, 9.987646E, 38 m, no exp., 28 October 2019, *D. Marchetti* (FI, MSNM). – Status change from casual to naturalized alien for the flora of Liguria.

E. Banfi, D. Marchetti, G. Galasso

***Cenchrus longispinus* (Hack.) Fernald (Poaceae)**

+ (CAS) **LOM**: Milano (Milano), Stazione Milano-Centrale, binari e massicciata ferroviaria a sinistra del binario 1 (WGS84: ca. 45.490013N, 9.207040E), binari ferroviari, 130 m, no exp., 21 September 2018, leg. *G. Galasso*, det. *G. Galasso*, *E. Banfi* (FI, MSNM). – Casual alien species new for the flora of Lombardia.

E. Banfi, G. Galasso, R. Gentili, C. Toffolo

***Ceratostigma plumbaginoides* Bunge (Plumbaginaceae)**

+ (CAS) **TOS**: Pontassieve (Firenze), fraz. Santa Brigida (WGS84: 43.852532N, 11.394439E), su un muro a secco, 400 m, 17 October 2019, *L. Pinzani* (FI, *Herb. L. Pinzani*). – Casual alien species new for the flora of Toscana.

A small population, likely derived from plants grown nearby as ornamentals.

L. Pinzani

***Citrullus lanatus* (Thunb.) Matsum. & Nakai subsp. *lanatus* (Cucurbitaceae)**

+ (CAS) **LIG**: Sarzana (La Spezia), ZSC "IT1345101 Piana della Magra", spiaggia di Marinella di Sarzana (WGS84: 44.046169N, 10.017139E), spiaggia, 2 m, 29 September 2019, *C. Turcato* (FI, GE No. 1422). – Casual alien subspecies new for the flora of Liguria.

This taxon was found in the habitat of community interest Code 2120 "Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)".

D. Dagnino, D. Longo, C. Turcato

+ (CAS) **CAL**: Rosarno (Reggio Calabria), Strada Consortile Melicucco "C.N. Eranov" (WGS84: 38.478225N, 15.979856E), bordo strada, 21 m, 13 September 2019, *C.M. Musarella* (FI, REGGIO); Trebisacce (Cosenza), lungo la linea ferroviaria (WGS84: 39.864318N, 16.531330E), ferrovia, 8 m, 27 October 2019, *C.M. Musarella* (REGGIO). – Casual alien subspecies new for the flora of Calabria.

C.M. Musarella

***Clerodendrum trichotomum* Thunb. (Lamiaceae)**

+ (CAS) **CAM**: Pietradefusi (Avellino), SP50 (WGS84: 41.043000N, 14.883660E), fessure del marciapiede, 392 m, 13 October 2019, leg. *C. Villano*, det. *C. Villano*, *C.M. Musarella* (FI, REGGIO). – Casual alien species new for the flora of Campania.

A single individual was observed, probably originating from a nearby adult fruiting plant.

C.M. Musarella, C. Villano

***Coix lacryma-jobi* L. (Poaceae)**

+ (CAS) **CAL**: Gerocarne (Vibo Valentia), fraz. Ariola (38.579422N, 16.261365E), incolto, 4 November 2015, *G. Spampinato* (FI); San Demetrio Corone (Cosenza), C.da Calamia (39.547517N, 16.372544E), giardino incolto, 5 November 2015, leg. *M. Zaretta*, det. *V.L.A. Laface*, *C.M. Musarella*, *G. Spampinato* (REGGIO). – Casual alien species new for the flora of Calabria.

C.M. Musarella, V.L.A. Laface, G. Spampinato

***Cucurbita moschata* Duchesne (Cucurbitaceae)**

+ (CAS) **LIG**: Pietra Ligure (Savona), Torrente Scarincio (WGS84: 44.160524N, 8.278689E), greto ghiaioso, 10 m, no exp., 11 August 2018, leg. *G. Galasso*, det. *G. Galasso*, *E. Banfi* (FI). – Casual alien species new for the flora of Liguria.

In Pietra Ligure and neighboring territories, the cultivar Trombetta di Albenga is very common.

G. Galasso, E. Banfi

***Cylindropuntia spinosior* (Engelm.) F.M.Knuth (Cactaceae)**

+ (CAS) **MAR**: Serra San Quirico (Ancona), presso le mura della città medievale (WGS84: 43.445366N, 13.017760E), pratello arido, 245 m, 5 August 2019, *G. Mei* (FI, ANC, *Herb. G. Mei*). – Casual alien species new for the flora of Marche.

We observed numerous individuals of different ages originating from seeds and rooting cladodes fallen to the ground. If confirmed in the coming years, this condition could allow the naturalization of the species.

G. Mei, A. Stinca, A. Ilari

***Cyperus glomeratus* L. (Cyperaceae)**

+ (NAT) **LIG**. – Status change from casual to naturalized alien for the flora of Liguria.

In the past, this species was observed in the Trebbia (province of Genova) and Nervia (province of Imperia) valleys, according to the Ottone Penzig's handwritten notes found on a copy of De Notaris (1844). We found numerous small populations in gravelly and muddy banks of the Magra and Vara rivers (province of La Spezia), in the Special Area of Conservation "IT1343502 Parco della Magra-Vara".

D. Dagnino, M.G. Mariotti, C. Turcato

***Dichondra micrantha* Urb. (Convolvulaceae)**

+ (NAT) **SAR**. – Status change from casual to naturalized alien for the flora of Sardegna.

Recently, this species has started a slow colonization in Sardegna, mainly in urban environments of Cagliari. Moreover, since 2018, it has been observed naturalized in the countryside of Oristano, in wet meadows of abandoned quarries.

G. Bacchetta, M. Fois, A. Lallai, L. Podda

***Digitaria ciliaris* (Retz.) Koeler (Poaceae)**

+ (CAS) **SIC**: Giardini Naxos (Messina) (WGS84: 37.840427N, 15.276211E), lungo un corso d'acqua perenne, ca. 14 m, 22 September 2019, *G. Tavilla, S. Cambria, S. Sciandrello* (FI, CAT). – Casual alien species confirmed for the flora of Sicilia.

According to Galasso et al. (2018), *Digitaria ciliaris* does not occur in Sicilia, even though it was already reported by Wilhalm (2009).

G. Tavilla, S. Cambria, S. Sciandrello

***Dimorphotheca ecklonis* DC. (Asteraceae)**

+ (CAS) **PUG**: Otranto (Lecce), muro presso la stazione ferroviaria (WGS84: 40.149166N, 18.481388E), muro in cemento e pietra calcarea, ca. 20 m, S, 21 August 2019, *N. Olivieri* (FI). – Casual alien species new for the flora of Puglia.

Some individuals of the species developed on an old sloping concrete and limestone wall, along with *Parietaria judaica* L.

N. Olivieri

Euphorbia marginata Pursh (Euphorbiaceae)

+ (CAS) **CAL**: Guardia Piemontese (Cosenza), fraz. Guardia Piemontese Marina (WGS84: 39.280614N, 15.584257E), fessure e margine di marciapiedi con accumulo di suolo e detriti, 30 m, 29 November 2019, *S. Fascetti, L. Rosati* (FI, HLUC). – Casual alien species new for the flora of Calabria.

S. Fascetti, L. Rosati

Fagopyrum esculentum Moench (Polygonaceae)

+ (CAS) **LIG**: Pietra Ligure (Savona), Torrente Maremola, presso la foce, subito a monte di Corso Italia (WGS84: 44.150564N, 8.286511E), greto, 1 m, no exp., 11 August 2018, *G. Galasso* (FI, MSNM). – Casual alien species confirmed for the flora of Liguria.

The presence of this species can be explained by the random dispersal of seeds, since they are frequently sold in food markets.

G. Galasso, E. Banfi

Ficus benjamina L. (Moraceae)

– **ITALIA** (**SAR**). – Alien species to be excluded from the flora of Italy (Sardegna).

An incomplete verification of literature sources generated mistaken reports of this cultivated species as casual alien in Sardegna. We argue that the record by Camarda et al. (2016) is due to a transcription mistake in the database supporting this work.

G. Bacchetta, G. Brundu, A. Lallai, L. Podda

Ficus elastica Roxb. ex Hornem. (Moraceae)

– **SAR**. – Alien species to be excluded from the flora of Sardegna.

This species was first reported for the island of La Maddalena (Sassari) by Bocchieri (1996). Later, it was indicated by several authors as a casual alien (Camarda et al. 2004; Bacchetta et al. 2009; Podda et al. 2012; Puddu et al. 2016). This is a misidentification with *Ficus macrophylla* Pers. subsp. *columnaris* (C.Moore) P.S.Green, only cultivated as ornamental.

G. Bacchetta, G. Brundu, A. Lallai, L. Podda

Ficus microcarpa L.f. (Moraceae)

+ (NAT) **SAR**. – Status change from casual to naturalized alien for the flora of Sardegna.

This species was introduced in the Botanical Gardens of Cagliari during the second half of the 19th century, and then cultivated as ornamental (Vannelli 1986). In recent years, many seedlings and saplings have been observed in different parts of Cagliari,

often close to the parental trees (Puddu et al. 2016). We found propagules in fallow land, roadsides, and ruderal sites, growing as a lithophyte on walls and cliffs, and even as an epiphyte on *Phoenix canariensis* H.Wildpret and *Jacaranda mimosifolia* D.Don. In Sardinian botanical literature, *Ficus microcarpa* has been reported under some incorrect names (Gennari 1874; Cavara 1901; Chiappini 1967, 1985; Vannelli 1986; Podda et al. 2012), such as *F. retusa* L. or *F. benjamina* L.

G. Bacchetta, G. Brundu, A. Lallai, L. Podda

***Ficus retusa* L. (Moraceae)**

– **ITALIA** (**SAR**). – Alien species to be excluded from the flora of Italy (Sardegna).

The first report of *Ficus retusa* as a casual alien was by Podda et al. (2012). However, this record is due to a confusion with *F. microcarpa* L.f., the only naturalized *Ficus* in Sardegna.

G. Bacchetta, G. Brundu, A. Lallai, L. Podda

***Froelichia gracilis* (Hook.) Moq. (Amaranthaceae)**

+ (NAT) **ITALIA** (**PIE**): Trecate (Novara), Via Vigevano, all'esterno della raffineria SARPOM (WGS84: 45.26147N, 8.47086E), piazzale asfaltato a bordo strada, 131 m, 10 July 2019, leg. *S. Assini*, *F. Bracco*, *G. Gheza*, det. *N.M.G. Ardenghi* (FI); *ibidem*, 25 July 2019, leg. *S. Assini*, det. *N.M.G. Ardenghi* (FI). – Naturalized alien species new for the flora of Italy (Piemonte).

The Central American *Froelichia gracilis* has been recorded as an alien in eastern United States, Japan, Australia, and Hungary (Harden 2001; McCauley 2003, 2004; Balogh et al. 2004). The plants recorded for Italy were identified according to McCauley (2003, 2004) and Merkingler et al. (2014). They grow in cracks of the asphalt in two unloading sites close to a refinery where they form a dense, almost monospecific, vegetation.

S. Assini, F. Bracco, G. Gheza, N.M.G. Ardenghi

***Galinsoga parviflora* Cav. (Asteraceae)**

+ (INV) **SIC**. – Status change from naturalized to invasive alien for the flora of Sicilia.

Recent investigations on the urban flora of Palermo (Domina et al. 2019) revealed that this species grows abundantly in all anthropized sites of the city, such as flowerbeds and interstices.

F. Scafidi, E. Di Gristina

***Hedera algeriensis* Hibberd (Araliaceae)**

+ (NAT) **LIG**: Framura (La Spezia), ZSC "IT1343419 Monte Serro", loc. Fornaci (WGS84: 44.21469N, 9.52060E), sottobosco di lecceta, 14 m, 2 August 2019, *D. Dagnino*, *C. Turcato* (FI, GE No. 873). – Naturalized alien species new for the flora of Liguria.

We observed a small population of this species in the undergrowth of a holm oak wood (habitat of community interest Code 9340 "*Quercus ilex* and *Quercus rotundifolia* forests").

D. Dagnino, L. Minuto, C. Turcato

+ (CAS) **CAL**: Oriolo (Cosenza), sulle mura del centro storico presso Vico I San Giacomo (WGS84: 40.050482N, 16.450353E), muro in pietra, sfuggita a coltura, 400 m, 1 January 2020, *F. Roma-Marzio*, *P. Liguori* (FI). – Casual alien species new for the flora of Calabria.

Several plants originated from a nearby potted plant were found in the cavity of a wall.

F. Roma-Marzio

***Heuchera sanguinea* Engelm. (Saxifragaceae)**

+ (CAS) **ABR**: Campotosto (L'Aquila), fraz. Ortolano, SS80 del Gran Sasso (WGS84: 42.519680N, 13.424938E), muro sul bordo della strada, ca. 1020 m, 23 June 2019, *N. Olivieri* (FI). – Casual alien species new for the flora of Abruzzo.

Some individuals, probably originated from seeds produced by plants once cultivated as ornamentals nearby, have settled on a wall made of cement and limestone blocks.

N. Olivieri

***Hordeum vulgare* L. subsp. *vulgare* (Poaceae)**

+ (CAS) **LIG**: Serra Riccò (Genova), ZSC "IT1330893 Rio Ciaè", Valle del Rio Ciaè, pendici SE del Monte Pizzo, lungo la SP3 (WGS84: 44.50302N, 8.96627E), scarpata erbosa a bordo strada, 385 m, 13 October 2019, *G. Barberis*, *D. Dagnino*, *D. Longo*, *S. Peccenini* (FI, GE No. 1496). – Casual alien subspecies new for the flora of Liguria.

D. Dagnino, D. Longo

***Lamium galeobdolon* (L.) L. subsp. *argentatum* (Smejkal) J.Duvign. (Lamiaceae)**

+ (NAT) **VDA**: Aosta (Aosta), sentiero sotto il parcheggio lungo la Strada Regionale Roisan (WGS84: 45.754196N, 7.326396E), sottobosco di latifoglie, 696 m, W, 9 July 2017, leg. *G. Galasso*, det. *G. Galasso*, *E. Banfi* (FI, MSNM). – Naturalized alien subspecies new for the flora of Valle d'Aosta.

G. Galasso, E. Banfi

+ (CAS) **TOS**: Massa (Massa-Carrara), Via Capannelle, tra i Prati della Ciocca e Altagnana (WGS84: 44.052663N, 10,170231E), margine della strada che attraversa un castagneto, su scisti silicei, 260 m, 14 April 2003, *D. Marchetti* (FI, ROV No. 45056). – Casual alien subspecies new for the flora of Toscana.

D. Marchetti, F. Prosser

Lantana camara L. subsp. *aculeata* (L.) R.W.Sanders (Verbenaceae)

+ (CAS) **LAZ**: Roma (Roma), area incolta situata presso la Via Tiburtina (WGS84: 41.908333N, 12.526150E), incolto, ca. 23 m, 25 July 2019, *N. Olivieri* (FI). – Casual alien subspecies new for the flora of Lazio.

Lantana camara is generically reported by Celesti-Grapow et al. (2013) and Galasso et al. (2018) for Lazio, without reference to the subspecies. Some fruiting individuals grow in an uncultivated degraded area.

N. Olivieri

Lemna minuta Kunth (Araceae)

+ (INV) **BAS**: Bernalda (Matera), in un canale artificiale lungo Via Dompablo (WGS84: 40.379124N, 16.843067E), in acque a lento scorrimento, 0 m, 4 October 2019, *S. Ceschin*, *F. Mariani* (FI); *ibidem*, loc. Santa Palagina (WGS84: 40.374560N, 16.838382E), in acque a lento scorrimento, 0 m, 4 October 2019, *S. Ceschin*, *F. Mariani* (URT). – Invasive alien species new for the flora of Basilicata.

This species occurs in dense monospecific and multilayered free-floating mats of about one-cm thickness, suggesting an invasive behaviour.

S. Ceschin, F. Mariani

Mazus pumilus (Burm.f.) Steenis (Mazaceae)

+ (NAT) **LOM**: Cremona (Cremona), Via Mercatello, di fronte al numero civico 27 e altrove nella via (WGS84: 45.134603N, 10.026109E), fessure della pavimentazione stradale (cubetti di porfido), 40 m, 19 May 2019, *A. Selvaggi* (MSNM). – Status change from casual to naturalized alien for the flora of Lombardia.

This new record combined with the presence and persistence also in other parts of the town leads us to consider this species as naturalized in Lombardia.

A. Selvaggi, F. Bonali

Ocimum basilicum L. (Lamiaceae)

+ (CAS) **EMR**: Fontevivo (Parma), fraz. Ponte Taro, Fiume Taro (WGS84: 44.827128N, 10.225855E), greto fluviale, 55 m, 15 October 2019, *M. Adorni* (FI). – Casual alien species new for the flora of Emilia-Romagna.

A single flowering and fruiting individual was found in the gravel bed of the river Taro, probably born from seeds transported by water.

M. Adorni

Oenothera lindheimeri (Engelm. & A.Gray) W.L.Wagner & Hoch (Onagraceae)

+ (CAS) **SAR**: Carbonia (Sud Sardegna), lungo la ciclabile a N di Via Lubiana (WGS84: 39.92800N, 8.30216E), incolti aridi, 70 m, 31 July 2019, *G. Calvia* (*Herb. G. Calvia*);

Sassari (Sassari), loc. Predda Niedda (WGS84: 40.737891N, 8.528253E), margine stradale ruderale, 153 m, 14 August 2019, *G. Brundu*, *V. Lozano* (FI, *Herb. UniSS Agraria*); Donori (Sud Sardegna), lungo la SP11 (WGS84: 39.2670N, 9.0822E), margine stradale, 150 m, 12 January 2020, *A. Lallai* (CAG). – Casual alien species new for the flora of Sardegna.

In Sardegna, this species is locally escaped in fallow land roadsides close to cultivation sites, as observed also in Florinas (Sassari) (WGS84: 40.651485N, 8.667238E, 350 m, 14 August 2019, *G. Brundu*).

G. Brundu, G. Calvia, A. Lallai, V. Lozano

Panicum barbipulvinatum Nash (Poaceae)

+ (INV) **FVG**: Venzone (Udine), Via A. Bidernuccio (WGS84: 46.3365N, 13.0891E), in the cracks of pavements, accompanied by *Eragrostis frankii*, 250 m, 6 October 2019, *G. Király*, *A. Király* (FI, BP); *ibidem*, 1.1 km SW of Pioverno on the left bank of river Tagliamento (WGS84: 46.3288N, 13.1219E), dry semi-ruderal grasslands, along with *Digitaria sanguinalis*, *Gypsophila repens*, *Sporobolus* spp., 234 m, 6 October 2019, *G. Király*, *A. Király* (FI, BP); Bordano (Udine), 0.2 km N of the village along the road Via Bordano (WGS: 46.3175N, 13.1122E), ruderal vegetation, along with *Artemisia verlotiorum*, *Panicum capillare*, *Oenothera* spp., 233 m, 6 October 2019, *G. Király, A. Király* (FI, BP). – Invasive alien species new for the flora of Friuli Venezia Giulia.

Panicum barbipulvinatum is a taxonomically critical species (Amarell et al. 2014; Király and Alegro 2015) that is quite common in the surroundings of Venzone, especially the Tagliamento valley. It was seen along several mountain roads of the area as well.

G. Király, A. Király

Panicum virgatum L. (Poaceae)

+ (CAS) **TOS**: Aulla (Massa-Carrara), stazione ferroviaria di Aulla, presso Via R. Accorsi (WGS84: 44.219659N, 9.978081E), incolto, 78 m, no exp., 16 October 2018, leg. *D. Marchetti*, det. *E. Banfi* (FI); *ibidem*, 17 September 2019, leg. *D. Marchetti*, det. *E. Banfi* (MSNM). – Casual alien species new for the flora of Toscana.

E. Banfi, D. Marchetti, G. Galasso

Passiflora morifolia Mast. (Passifloraceae)

+ (NAT) **ITALIA** (**SAR**): Assemini (Cagliari), fraz. Su Carroppu (WGS84: 39.298837N, 8.986744E), lungo le siepi e nei frutteti, 7 m, 23 October 2019, *G. Bacchetta*, *L. Onnis*, *L. Podda*, *M. Sarigu* (FI, CAG). – Naturalized alien species new for the flora of Italy (Sardegna).

The South American *Passiflora morifolia* (Miller 1997; Imig et al. 2018) has been recently introduced into Europe, mainly for ornamental purposes, similarly to other species of the genus *Passiflora*. In Assemini, its presence has been observed since 2006,

close to the regional nursery "Is Bagantinus". Since then, this species has spread as far as about 2 km from there, colonizing orchards, walls, ruderal places, and fallow land.

G. Bacchetta, L. Onnis, L. Podda, M. Sarigu

***Persicaria capitata* (Buch.-Ham. ex D.Don.) H.Gross (Polygonaceae)**

+ (CAS) **SAR**: Nuoro (Nuoro) (WGS84: 40.320602N, 9.336254E), bordi stradali, nelle fessure dei marciapiedi, 546 m, 13 September 2019, leg. *M. Manca*, det. *M. Manca*, *G. Brundu* (FI, *Herb. FoReSTAS Orgosolo*). – Casual alien species new for the flora of Sardegna.

M. Manca, G. Brundu

***Phyllostachys aurea* Carrière ex Rivière & C.Rivière (Poaceae)**

+ (CAS) **PUG**: Galatina (Lecce), fraz. Collemeto, SS101 Salentina di Gallipoli (WGS84: 40.214713N, 18.099997E), bordo strada, 48 m, 25 August 2019, *C.M. Musarella* (FI, REGGIO). – Casual alien species new for the flora of Puglia.

Several individuals of the species were observed, probably escaped from a nearby garden.

C.M. Musarella

***Platanus hispanica* Mill. ex Münchh. (Platanaceae)**

+ (NAT) **LIG**: Genova (Genova), quartiere Marassi, Torrente Bisagno, poco a monte dello stadio Luigi Ferraris (WGS84: 44.418133N, 8.948721E), greto del torrente, 16 m, 16 May 2019, *C. Turcato* (FI, GE No. 797); *ibidem*, 29 July 2019, *D. Dagnino*, *C.N. Macrì* (FI, GE No. 798); *ibidem*, quartiere Bolzaneto, Torrente Polcevera, presso Ponte Luigi Ratto (WGS84: 44.464201N, 8.898426E), greto, 46 m, 1 August 2019, *D. Dagnino* (FI, GE No. 568). – Naturalized alien species new for the flora of Liguria.

Both populations are large, showing well established individuals of several age classes, and possibly originated from old individuals of the nearby tree-lined avenues.

D. Dagnino, C. Turcato, D. Longo, L. Minuto

***Platycladus orientalis* (L.) Franco (Cupressaceae)**

+ (CAS) **TOS**: Altopascio (Lucca), stazione ferroviaria, lungo i binari (WGS84: 43.817002N, 10.672046E), massicciata ferroviaria, 14 m, 23 October 2018, *M. Mugnai*, *L. Lazzaro*, *G. Ferretti* (FI). – Casual alien species new for the flora of Toscana.

Young individuals of *Platycladus orientalis* may present a notable leaf dimorphism in their juvenile leaves (Dörken 2013), possibly leading to misidentification as *Calocedrus decurrens* (Torr.) Florin.

M. Mugnai, L. Lazzaro, G. Ferretti

***Pleuropterus multiflorus* (Thunb.) Nakai (Polygonaceae)**

+ (INV) **TOS**: Siena (Siena), Porta Tufi (WGS84: 43.313989N, 11.331430E), margine stradale, 340 m, 11 October 2017, leg. et det. *P. Castagnini*, *F. Serafino*, conf. *G. Galasso* 8 March 2019 (FI). – Invasive alien species new for the flora of Toscana.

G. Bonari, I. Bonini, P. Castagnini

+ (CAS) **MAR**: Ancona (Ancona), giardini del Passetto (WGS84: 43.615943N, 13.533277E), siepi, 40 m, 6 November 2019, *L. Gubellini*, *N. Hofmann* (FI, PESA). – Casual alien species new for the flora of Marche.

L. Gubellini, N. Hofmann

***Pseudosasa japonica* (Siebold & Zucc. ex Steud.) Makino ex Nakai (Poaceae)**

+ (CAS) **TOS**: Siena (Siena), podere La Vigna, lungo il Fosso Ravacciano (WGS84: 43.3205681N, 11.3400000 E), margine di fosso, 250 m, 17 June 2019, leg. *M. Apruzzese*, det. *L. Pinzani* (FI, *Herb. L. Pinzani*). – Casual alien species new for the flora of Toscana.

The species grows in the city centre of Siena, along a river that crosses a relic forest (Bosco di Busseto), forming a dense population. Another small population has been observed nearby (Siena, Fonte di Follonica, WGS84: 43.3205117N, 11.3353871E, 285 m).

L. Pinzani, M. Apruzzese, C. Angiolini

***Raphanus raphanistrum* L. subsp. *sativus* (L.) Schmalh. (Brassicaceae)**

+ (CAS) **LIG**: Serra Riccò (Genova), ZSC "IT1330893 Rio Ciaè", Valle del Rio Ciaè, pendici SE del Monte Pizzo, lungo la SP3 (WGS84: 44.50468N, 8.96785E), bordo strada, al margine di ostrieto, 400 m, 13 October 2019, *G. Barberis*, *D. Dagnino*, *D. Longo*, *S. Peccenini* (FI, GE No. 1008). – Casual alien subspecies new for the flora of Liguria.

G. Barberis, D. Dagnino, D. Longo, S. Peccenini

***Rhus coriaria* L. (Anacardiaceae)**

+ (CAS) **CAL**: Reggio Calabria (Reggio Calabria), fraz. Pellaro, SS106 Jonica (WGS84: 38.034271N, 15.658410E), scarpata stradale, 15 m, 9 August 2019, *C.M. Musarella* (REGGIO); *ibidem*, Via Eremo Pietrastorta (WGS84: 38.113496N, 15.673585E), bordo strada, giardino abbandonato, 537 m, 28 September 2019, *V.L.A. Laface* (REGGIO); *ibidem*, Cittadella Universitaria (WGS84: 38.121697N, 15.662514E), scarpata bordo strada, 72 m, 10 January 2020, leg. *V.L.A. Laface*, det. *V.L.A. Laface, C.M. Musarella*, *G. Spampinato* (REGGIO); Sant'Alessio in Aspromonte (Reggio Calabria), SS184 Gallico-Gambarie (WGS84: 38.170131N, 15.768870E), bordo strada, 537 m, 28 September 2019, *V.L.A. Laface* (FI, REGGIO). – Casual alien species confirmed for the flora of Calabria.

C.M. Musarella, V.L.A. Laface, G. Spampinato

Salvia abrotanoides (Kar.) Sytsma × *S. yangii* B.T.Drew (Lamiaceae)

+ (CAS) **LAZ**: Bracciano (Roma), fraz. Vigna di Valle, presso l'Aeroporto di Vigna di Valle, di fronte all'hangar "Tricampate", sul Lago di Bracciano (WGS84: 42.084687N, 12.221944E), riva lacustre, su suolo sabbioso, 162 m, 19 September 2019, *S. Buono* (FI). – Casual alien nothospecies new for the flora of Lazio.

A single mature individual grows on sandy soil near the coasts of Lake Bracciano, along with other alien species such as *Amorpha fruticosa* L., *Datura stramonium* L., and *Xanthium italicum* Moretti.

S. Buono, S. Magrini

Salvia hispanica L. (Lamiaceae)

+ (CAS) **VEN**: San Martino Buon Albergo (Verona), sponda dx del Fiume Adige, subito a W di San Procolo, presso Zevio (WGS84: 45.3799085N, 11.1055010E), sponda sabbiosa, 3 esemplari, 30 m, 23 October 2015, leg. *F. Prosser*, *A. Bertolli*, *G. Tomasi*, *S. Andreatta*, det. *F. Prosser* (ROV No. 69728); Verona (Verona), sponda sx del Fiume Adige, 250 m a W del Ponte di San Pancrazio (WGS84: 45.4274692N, 11.0185053E), greto sassoso, 2 esemplari, 50 m, 11 November 2015, leg. *F. Prosser*, *A. Bertolli*, *S. Andreatta*, *G. Tomasi*, det. *F. Prosser* (ROV No. 69916); *ibidem*, ENE di Corte Garofalo, sull'isola presso la sponda dx del Fiume Adige (WGS84: 45.4060915N, 11.0282974E), greto sassoso, 3 esemplari, 44 m, 11 November 2015, leg. *F. Prosser*, *A. Bertolli*, *S. Andreatta*, *G. Tomasi*, det. *F. Prosser* (FI, ROV No. 71302). – Casual alien species new for the flora of Veneto.

Further data for the province of Verona are: river Adige, north of Perzacco (16 November 2015, 2 individuals); the creek known as Illasi, between Tregnago and Illasi (3 October 2019, 100 scattered individuals); Progno (creek) di Valpantena, between Grezzana and Quinto (17 October 2019, a dozen scattered individuals); Verona, river Adige, just downstream of the railway bridge (25 October 2019, one individual). All observations refer to sterile or budding plants. Along the Illasi creek, the plants reached full bloom in early November 2019, so that reproduction is possible.

F. Prosser, A. Bertolli, G. Tomasi, F. Menini

Sedum praealtum A.DC. (Crassulaceae)

+ (CAS) **MOL**: Termoli (Campobasso), versante orientale del promontorio sul quale sorge il borgo antico (WGS84: 42.004633N, 14.998402E), parete rocciosa assolata di natura conglomeratica, ca. 5 m, 14 July 2019, *N. Olivieri* (FI). – Casual alien species new for the flora of Molise.

N. Olivieri

***Setaria pumila* (Poir.) Roem. & Schult. subsp. *pallide-fusca* (Schumach.) B.K.Simon (Poaceae)**

+ (CAS) **ITALIA** (**TOS**): Aulla (Massa-Carrara), stazione ferroviaria di Aulla, presso Via R. Accorsi (WGS84: 44.219469N, 9.978091E), incolto, 78 m, no exp., 16 October 2018, leg. *D. Marchetti*, det. *E. Banfi* (FI, MSNM). – Casual alien subspecies new for the flora of Italy (Toscana).

This subspecies can be easily distinguished from the autonym by the smaller spikelets (2.0–2.5 mm) and the copper-reddish bristles (Rominger 2003). Some authors (e.g., Morrone et al. 2014) consider it as a synonym of *S. pumila*.

E. Banfi, D. Marchetti, G. Galasso

***Sporobolus indicus* (L.) R.Br. (Poaceae)**

+ (NAT) **UMB**: Magione (Perugia), fraz. San Feliciano, sul lungolago (WGS84: 43.117928N, 12.165532E), aiuola, 279 m, 29 September 2019, *N. Hofmann* (FI, PESA). – Naturalized alien species new for the flora of Umbria.

L. Gubellini, N. Hofmann

***Stachys byzantina* K.Koch (Lamiaceae)**

+ (CAS) **LIG**: Sant'Olcese (Genova), loc. Tullo, ZSC "IT1330893 Rio Ciaè", presso una carrareccia (WGS84: 44.493684N, 8.982430E), margine di prati aridi, 453 m, 8 July 2019, *A. Di Turi* (FI, GDOR, GE). – Casual alien species new for the flora of Liguria.

A cluster of well-developed individuals was found close to a cart track, next to arid grasslands.

A. Di Turi

***Thinopyrum obtusiflorum* (DC.) Banfi (Poaceae)**

+ (NAT) **TOS**: Aulla (Massa-Carrara), stazione ferroviaria di Aulla, presso Via R. Accorsi (WGS84: 44.219379N, 9.977977E), incolto, numerosi individui fino a 44.218973N, 9.977592E, 78 m, no exp., 16 October 2018, leg. *D. Marchetti*, det. *E. Banfi* (FI); *ibidem*, 17 September 2019, leg. *D. Marchetti*, det. *E. Banfi* (MSNM). – Naturalized alien species new for the flora of Toscana.

E. Banfi, D. Marchetti, G. Galasso

***Thuja plicata* Donn ex D.Don (Cupressaceae)**

+ (CAS) **ITALIA** (**PIE**): Meugliano (Torino), Lago di Meugliano, nei pressi della strada sterrata che percorre il crinale a S del lago (WGS84: 45.475116N, 7.790035E),

boschi misti di latifoglie, 745 m, 8 May 2019, *M. Lonati*, *M. Pittarello*, *S. Ravetto Enri* (FI). – Casual alien species new for the flora of Italy (Piemonte).

This species was identified according to Chambers (1993), Schulz et al. (2005), and Tison and de Foucault (2014). It was introduced in the surroundings of Lake Meugliano in the 1930s for reforestation purposes. Offspring of this species is abundant near seed-bearing plants; some young individuals have also been found *ca.* 200 m away as the crow flies.

M. Lonati, M. Pittarello, S. Ravetto Enri

***Tradescantia pallida* (Rose) D.R.Hunt (Commelinaceae)**

+ (CAS) **MOL**: Termoli (Campobasso), lungo Viale d'Italia (WGS84: 41.999713N, 14.990261E), bordo di chiusino per la raccolta delle acque piovane, ca. 35 m, 14 July 2019, *N. Olivieri* (FI). – Casual alien species new for the flora of Molise.

The observed individuals probably originated from fragments of plants cultivated as ornamentals in nearby houses.

N. Olivieri

***Tradescantia virginiana* L. (Commelinaceae)**

+ (CAS) **FVG**: Paluzza (Udine), Via Nazionale (WSG84: 46.527719N, 13.013224E), prato incolto nei pressi del margine stradale, 605 m, 15 July 2019, *J. Lupoletti*, *A. Pica* (FI). – Casual alien species new for the flora of Friuli Venezia Giulia.

A small population occupying an area of approximately 5 m^2 was observed.

J. Lupoletti, A. Pica

***Ulmus pumila* L. (Ulmaceae)**

+ (NAT) **LIG**: Vado Ligure (Savona), Via Trieste, in prossimità dei cantieri navali (WGS84: 44.267120N, 8.439779E), incolto, 4 m, 13 July 2019, *M. Lonati*, *A. Mainetti*, *S. Ravetto Enri* (FI); *ibidem*, Via Leon Pancaldo 158 (WGS84: 44.271611N, 8.438521E), aiuole prospicenti al lungomare, 10 m, 13 July 2019, *M. Lonati*, *A. Mainetti*, *S. Ravetto Enri* (FI). – Naturalized alien species new for the flora of Liguria.

This species has widely colonized uncultivated and abandoned areas and roadsides. Some individuals have reached big dimensions (6–7 m high) and are already fructifying. The documented risk of hybridization with the native *Ulmus* species (Cogolludo-Augustin et al. 2000; Brunet et al. 2013) suggests monitoring its spread in the region.

M. Lonati, A. Mainetti, S. Ravetto Enri

***Verbena bonariensis* L. (Verbenaceae)**

+ (CAS) **VEN**: Legnaro (Padova), sul margine stradale di Via Orsaretto (WSG84: 45.343510N, 11.954306E), margine di campo coltivato a monocoltura di *Glycine max*, 10 m, 3 July 2019, *J. Lupoletti*, *A. Pica* (FI). – Casual alien species new for the flora of Veneto.

We found a single plant at the border of a soybean field.

J. Lupoletti, A. Pica

***Washingtonia filifera* (Linden ex André) H.Wendl. ex de Bary (Arecaceae)**

+ (CAS) **LAZ**: Roma (Roma), nel giardino pubblico di Villa Lazzaroni (WGS84: 41.521909N, 12.312398E), aiuola, 46 m, 7 August 2019, *G. Buccomino* (FI). – Casual alien species new for the flora of Lazio.

In the site, there are three cultivated palms, two of which produce a large amount of seeds; some young seedlings were observed at their base.

G. Buccomino

***Wisteria sinensis* (Sims) DC. (Fabaceae)**

+ (CAS) **PUG**: Arnesano (Lecce), SP119 (WGS84: 40.331384N, 18.090544E), bordo strada, 30 m, 24 August 2019, *C.M. Musarella* (FI, REGGIO). – Casual alien species new for the flora of Puglia.

Some young individuals were also found, maybe arisen *via* vegetative propagation.

C.M. Musarella

Nomenclatural novelties

***Cenchrus americanus* (L.) Morrone subsp. *chudeaui* (Maire & Trab.) Banfi & Galasso, comb. et stat. nov.**

urn:lsid:ipni.org:names:77209604-1

Pennisetum chudeaui Maire & Trab., Bull. Mus. Natl. Hist. Nat. s. 2, 3(6): 523. 1931 [25 June 1931]

Recently Sosef (2019) published the new combination in *Cenchrus* L. for *Pennisetum chudeaui* Maire & Trab. subsp. *monodii* Maire, the progenitor of pearl millet, *Cenchrus americanus* (L.) Morrone subsp. *americanus* (Burgarella et al. 2018). However, the correct epithet at subspecific rank is '*chudeaui*' since '*monodii*', described simultaneously to the species (Maire 1931), is now considered a heterotypic synonym. Consequently, a new combination is required due to the priority of the autonym (Art. 11.6 of the ICN: Turland et al. 2018) that Maire automatically established when describing its subspecies (Art. 26.3 of the ICN).

E. Banfi, G. Galasso

***Cucumis sativus* L. subsp. *hardwickii* (Royle) Banfi & Galasso, comb. et stat. nov.**
urn:lsid:ipni.org:names:77209607-1

Cucumis hardwickii Royle, Ill. Bot. Himal. Mts. [Royle] 7: 220 (218, 219, pl. 47 fig. 3). 1835 [24 August 1835]

Molecular analyses (Sebastian et al. 2010; Qi et al. 2013; Liu et al. 2015) confirmed the exclusive role of the Indian wild cucumber *Cucumis hardwickii* in the genesis of the cultivated cucumber *C. sativus* (de Wilde and Duyfjes 2008). Regarding taxonomy, we have already emphasized (Galasso et al. 2018) that the rank of subspecies is preferable when distinguishing between a crop and its wild ancestor whenever domestication has proceeded linearly from the second to the first without any external genetic contribution.

E. Banfi, G. Galasso

***Rhaphiolepis bibas* (Lour.) Galasso & Banfi, comb. nov.**
urn:lsid:ipni.org:names:77209608-1

Crataegus bibas Lour., Fl. Cochinch. 1: 319. 1790 [September 1790]
Pyrus bibas (Lour.) M.F.Fay & Christenh., Global Fl. 4: 98. 2018 [9 February 2018]

Based on molecular, morphological, and geographic evidences, Liu et al. (2020) merged *Eriobotrya* Lindl. within *Rhaphiolepis* Lindl. For the loquat, *Eriobotrya japonica* (Thunb.) Lindl., the authors chose the replacement name *Rhaphiolepis loquata* B.B.Liu & J.Wen, because the epithet '*japonica*' was unavailable in *Rhaphiolepis* due to *Rhaphiolepi japonica* Siebold & Zucc. However, the new epithet is superfluous, although not illegitimate, in comparison with *Crataegus bibas*, also reported by the above-cited authors in synonymy, which holds priority at species level (Art. 11.4 of the ICN).

G. Galasso, E. Banfi

Nomenclatural and distribution updates from other literature sources

Nomenclatural, status, distribution updates, and corrections to Galasso et al. (2018) are provided in Suppl. material 1.

G. Galasso, F. Bartolucci

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Supplementary material 1

Supplementary data

Authors: Gabriele Galasso, Fabrizio Bartolucci

Data type: species data

Explanation note: 1. Nomenclatural updates; 2. Note updates; 3. Distribution updates; 4. Synonyms, misapplied or included names.

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